

## PROJECT DESCRIPTION

## GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE INSTALLATION OF APS (ACCESSIBLE PEDESTRIAN SIGNALS/CPS (COUNTDOWN PEDESTRIAN SIGNALS AND THE UPGRADING OF SIDEWALK RAMPS AT THE INTERSECTION OF MD 924 (MAIN STREET/EMMORTON ROAD) AND E. MAC PHAIL ROAD IN HARFORD COUNTY, MARYLAND.

MD 924 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

## INTERSECTION OPERATION

THE INTERSECTION OPERATES IN A NEMA FIVE-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 924 APPROACHES OPERATING CONCURRENTLY AND THE E. MAC PHAIL ROAD APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR THE NORTHBOUND MD 924 APPROACH.

AN ALTERNATE PEDESTRIAN PHASE WILL BE PROVIDED ACROSS THE SOUTH LEG OF MD 924.

## TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

MD 924 (EMMORTON ROAD) AND E. MAC PHAIL ROAD - SOUTH LEG

## STREETS AT 90 DEGREES

WAIT: "WAIT TO CROSS EMMORTON AT EAST MAC PHAIL. WAIT." \*

WALK: RAPID TICK

\* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'  
\*\* MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

## CONTROLLER REQUIREMENTS

THE EXISTING POLE MOUNTED CABINET AND CONTROLLER WILL BE USED. THE CONTROLLER WILL BE RETROFITTED TO OPERATE VIDEO DETECTION EQUIPMENT AND APS EQUIPMENT.

## MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.02-01 (SHOULDER WORK)

STANDARD NO. MD-104.02-13 (INTERSECTION FLAGGING OPERATION)

STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)

## PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. ERIN KUHN  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
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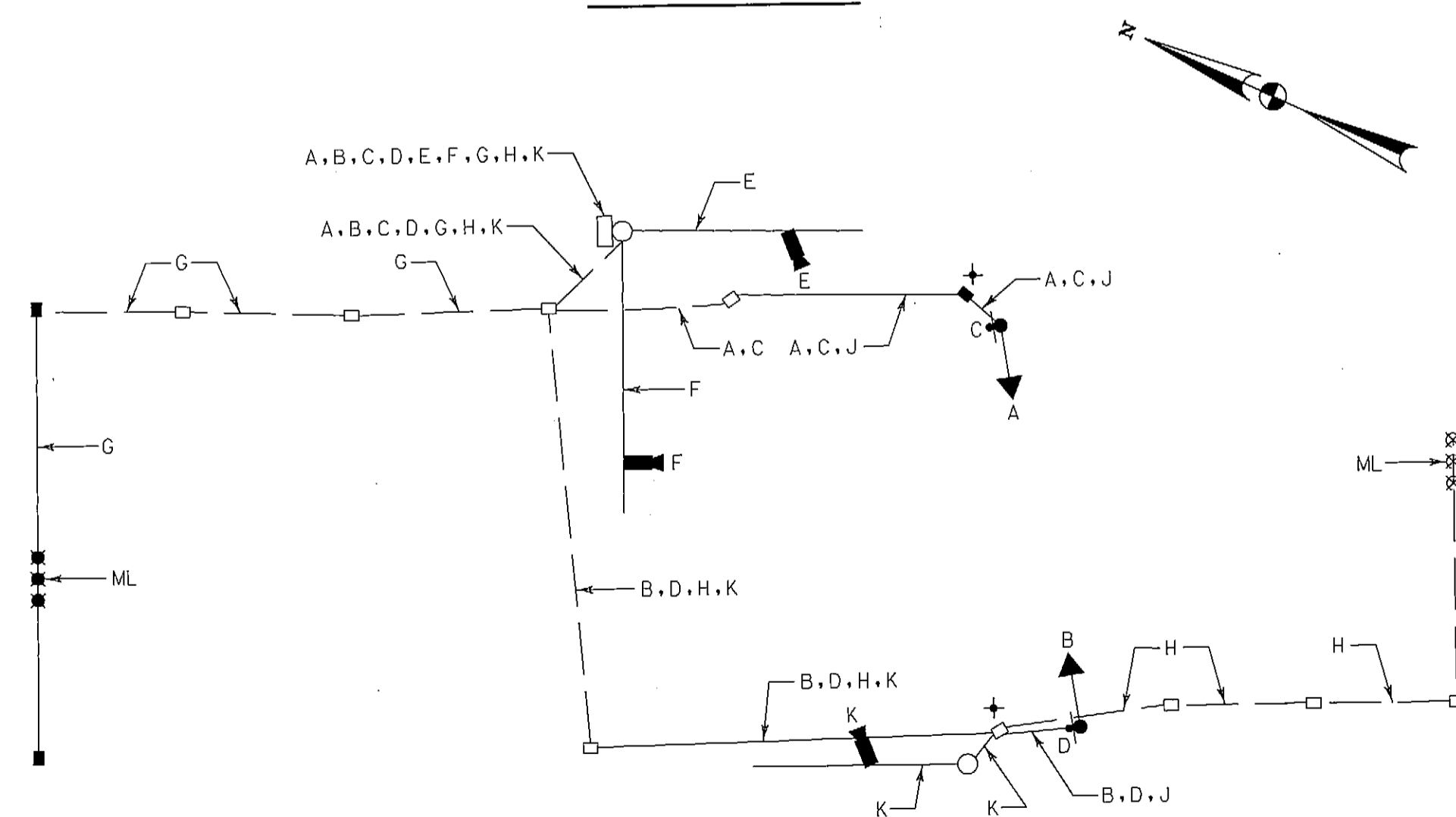
MR. ROBERT SYNDER  
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MR. ANDRE FUTRELL  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
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MR. RICHARD L. DAFF, SR.  
CHIEF, TRAFFIC OPERATIONS DIVISION  
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DISTRICT UTILITY ENGINEER  
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## WIRING DIAGRAM



## WIRING KEY

A } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

B } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

C } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

D } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

E } VIDEO CAMERA DETECTION LEAD-IN CABLE

F } VIDEO CAMERA DETECTION LEAD-IN CABLE

G } PROPOSED MICROLOOP PROBE LEAD-IN

H } EXISTING MICROLOOP PROBE LEAD-IN

J } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

ML - MICROLOOP PROBE SET

K - 3/4 IN. X 10 FT. GROUND ROD

## EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

CATEGORY CODES	QUANTITY	DESCRIPTION
900000	1 EACH	VIDEO INTERFACE EQUIPMENT: 1-8 CAMERAS
973023	2 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (POLE MOUNT) : - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS EMMORTON ROAD"

## EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

ALL REMOVED SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR

## PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	
PHASE 1 + 6	G	G	G	R	R	R	R	R	R	DW	DW	
1 + 6 CHANGE	G	G	Y	R	R	R	R	R	R	DW	DW	
PHASE 2 + 6	G	G	G	G	G	R	R	R	R	DW	DW	
2 + 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	
PHASE 4 + 8	R	R	R	R	R	G	G	G	G	DW	DW	
4 + 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW	
PHASE 4 + 8 ALT	R	R	R	R	R	G	G	G	G	WK	WK	
PED CLEARANCE	R	R	R	R	R	G	G	G	G	FLOW	FLOW	
4 + 8 ALT CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW	
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLR	FLR	FLR	FLR	DARK	DARK	

## EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

CATEGORY CODES	QUANTITY	DESCRIPTION
114280	25 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS - ANY WIDTH
203030	2 C.Y.	TEST PIT EXCAVATION
585621	500 L.F.	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	110 L.F.	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
801004	2 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
802145	1 EACH	ADJUST EXISTING HANDHOLE
802501	100 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
805115	65 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
805118	135 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED
805135	20 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
805140	25 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
810601	1 EACH	NONINVASIVE DETECTOR, 500 FOOT LEAD IN CABLE
811001	2 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
813015	2 S.F.	INSTALL OVERHEAD SIGN
816001	3 EACH	VIDEO DETECTION CAMERA
816005	2 EACH	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
816010	1 EACH	CONTROL CABLE, 500 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER
818004	2 EACH	10 FOOT BREAKAWAY PEDESTAL POLE
837001	2 EACH	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
861105	385 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G.)
861107	395 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
800000	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
800000	2 EACH	16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	2 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION
800000	1 EACH	2-WIRE CENTRAL CONTROL UNIT



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION

MD 924 (Main Street/Emmorton Road) and E. Mac Phail Road  
Bel Air, Maryland

## GENERAL INFORMATION SHEET

SCALE NONE ADVERTISED DATE 3/31/2011 CONTRACT NO. HA3875177

DESIGNED BY S. Bloss COUNTY Harford

DRAWN BY S. Bloss LOGMILE 12092404.81

CHECKED BY N. Leary TMS NO. PENDING

F.A.P. NO. TOP NO.

TS NO. 2063B DRAWING TSP-3 OF 3 SHEET NO. 3 OF 3



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